U.S. Department of Labor

# Make the RIGHT Decision

Mine Safety and Health Administration

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# Introduction

- Today we are going to review the basics of two acronyms “SLAM” and “SMART”
- These are tools that will help the mining industry attain a new level of risk assessment and long term risk management



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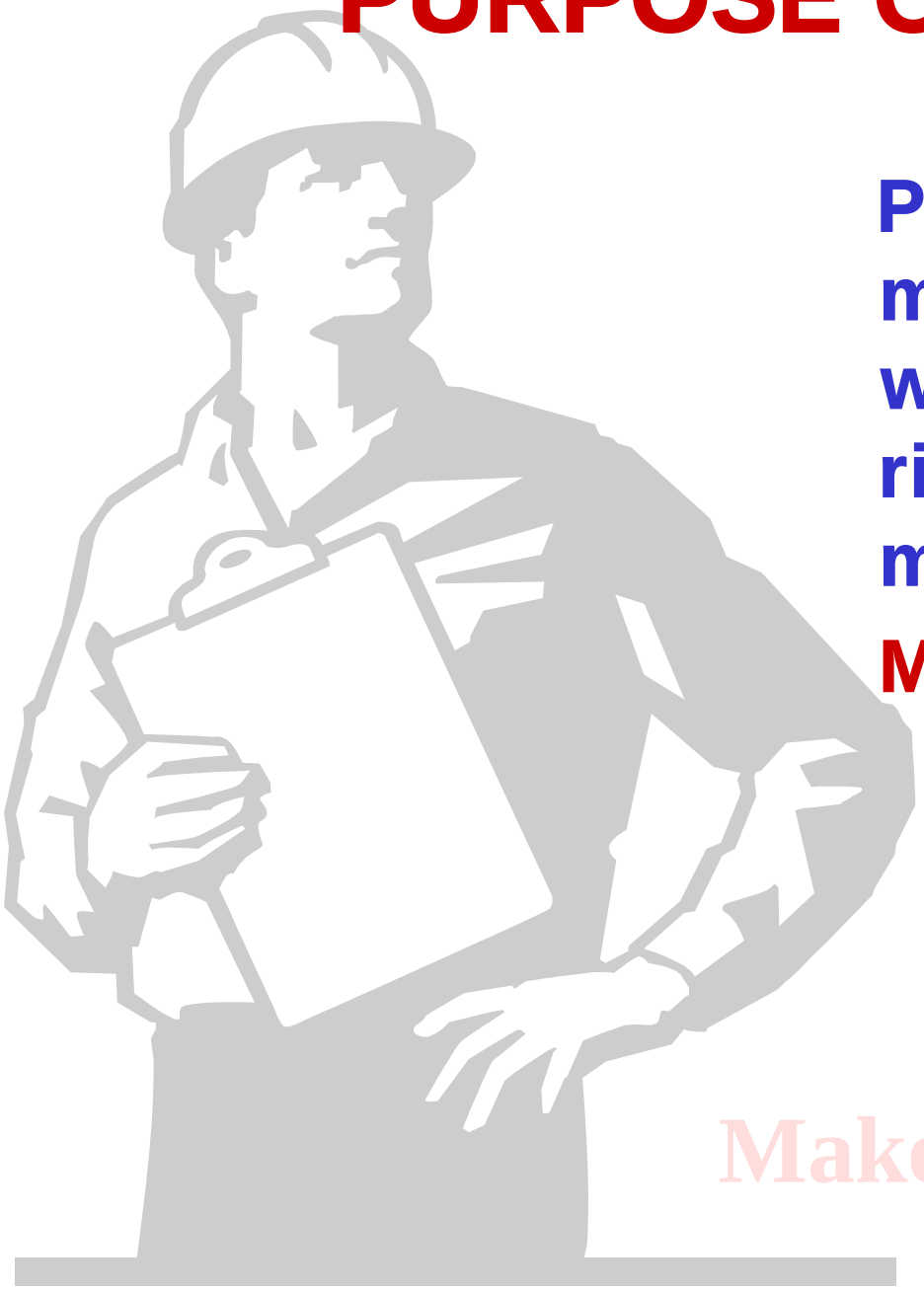
**RIGHT Decisions are made when miners SLAM Risks the SMART Way!**

# PURPOSE OF THE PROGRAM



**Provide mine management and miners with the tools to manage risk and encourage miners to…**

**Make the RIGHT Decision**

Make the RIGHT Decision!

# WHAT IS RISK?

- **Risk is the combination of the likelihood that an accident or injury will occur and its potential severity**
- **A hazard is anything that has the potential to cause harm**
- **Harm is the negative affect on one's safety or health**



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# THERE IS RISK IN EVERYTHING WE DO

- **Regardless of the job in the mining industry, a potential for danger always exists**
- **Mining has few constant factors and many variables**
- **Environment, conditions, and human factors all impact this risk**
- **Risks must be eliminated or mitigated by identifying, evaluating, and controlling the hazards as each task is performed**
- **Performing this process on a recurring basis creates system safety and health**

# WHERE DO WE BEGIN TO LOOK FOR THE HAZARDS?

## In the "*SYSTEM*"

- The system is the composite of **people**, **machines**, and **materials** that are used to perform a specific task in a specified environment
- All components are interrelated so a failure of any part can cause a failure of the system
- Our risk assessment must take into account all the components and any associated hazards and human factors

# What are the Tools to Manage Risk?

- Risk assessment techniques
- Training on how to remove or mitigate risks
- Conducting barrier analysis and implementing controls
- Strategies for performing evaluations and analysis of at-risk actions and occupations
- Procedures to identify motivators of risky actions

# Mining Factors that Motivate Risky Actions

- **Production**
  Excessive emphasis or focus on production
- **Inconvenience**
  It's often very inconvenient to follow safety regulations
- **Pride, Ego, or Fear of Appearing Incompetent**
  These attitudes prevent some miners from asking for help
- **Working Alone**
  Many times this increases the opportunity for at-risk behaviors

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# Risk Management for Miners (SLAM)

- **S**top – think through the task
- **L**ook – identify the hazards for each job step
- **A**nalyze – determine if you have the proper knowledge, training and tools to do the task
- **M**anage – remove or control hazards and use the proper equipment

# STOP

- Not so fast!
- Freeze the situation for a moment and look at each step in the task
- Is this a new task?
- Has the task changed?
- When was the last time you did this task?
- Do you feel comfortable doing this task?
- If you do not, you need training



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# LOOK

- Always inspect the work area for potential hazards
- This step begins prior to starting any task, during the task, and after the task is completed
- Identify the hazards for each job step
- Evaluate what must be done in respect to the potential hazards

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# ANALYZE

- Determine if you have the
  - ☑ Knowledge
  - ☑ Skills
  - ☑ Training
  - ☑ Tools to do the task safely
- Think about what else you need in order to perform the task safely
- If you need help, ask for it
- If you need training, do not perform the task until you have been trained



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# MANAGE

- Take the appropriate action to eliminate or minimize any hazards that make the risk unacceptable
- Ensure that the proper equipment is used and that it has been well maintained
- Take account of the task just completed
- Did anything unanticipated happen?
- Address unplanned occurrences and plan for them in the future
- Share this information with other miners and mine management

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# Example - SLAM

- Guarding moving machine parts
- One of the most commonly cited standards in MSHA

- Sam has been assigned to perform maintenance on the belt
- Before performing maintenance, Sam takes a moment to think through the task **(STOP)**

# Example - SLAM

- Sam realizes the possible hazards involved in this task are moving machine parts, slips, trips, and falls, uncontrolled energy sources, spillage, and lifting hazards

- He identifies a missing guard and notices that the guard is laying on the ground

- The missing guard presents a moving machine part hazard that Sam must address **(LOOK)**

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# Example - SLAM

- Sam determines that he knows how to adequately guard moving machine parts. He can reinstall the guard with the proper tools and assistance **(ANALYZE)**

- Sam gets help and safely installs the guard back in place and reports the situation to his supervisor **(MANAGE)**

**Sam has just SLAMmed it!**

# Risk Management for Mine Operators

## (SMART)

- **S**TOP – Isolate each step in a task and identify past and potential accidents, injuries, and violations
- **M**EASURE – Evaluate the risks associated with the task and barriers that have allowed hazards to cause injuries
- **A**CT – Implement controls to minimize or eliminate any hazards that make the risk unacceptable

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# Risk Management for Mine Operators

## (SMART)

- **REVIEW – Conduct frequent work site visits to observe work practices and audit accidents, injuries, and violations to identify root causes**
- **TRAIN – Develop a human factor-based action plan and then involve and train the miners**



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# STOP

- Develop one or more health and safety teams comprised of management and miners
- Teams must meet regularly to discuss accidents, violations, observations, audits, and testimonies of miners who have **SLAM**med Risks
- Identify specific risky acts and tasks that need to be targeted
- Share with all miners and incorporate their suggestions

# MEASURE

- Perform root cause analysis to find out why unsafe acts are happening
- List the barriers that permit these unsafe acts (physical, human)
- Share with all miners and incorporate their suggestions



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# ACT

- Decide on one or more engineering, administrative, and personal protective equipment (PPE) controls
- Share with all miners and incorporate their suggestions
- Install, require, and/or enact these controls



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# REVIEW

- Perform announced and unannounced observations where miners observe the work practices of other miners
- Miners must record their observations and discuss with the miners they have observed
- Perform audits on observations, violations, accidents, and SLAM testimony
- Share audit findings with miners and incorporate their suggestions

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# TRAIN

- Develop ingenious proactive and reactive programs that will create a safe and healthy work culture at the mine
- Share with all miners and incorporate their suggestions
- Take safety and health to the next level by enacting these programs



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# Guarding example cont'd. SMART

- The supervisor that Sam spoke to realizes that he needs to develop a team of employees and management to address why the guard was not put back in place.

**(STOP)**

- The team identifies the root cause of why the guard is taken off and not put back in place. The guard is removed to grease and is then too heavy and difficult to handle.

**(MEASURE)**

# Example - SMART

- The team decides the guard needs to be made out of lighter materials and engineered so that it is easy to handle. The new guard is designed and installed with grease fittings on the outside of the guard. **(ACT)**

- Miners observe each other to determine if the guard is being put back in place. They find that the guard is easy to handle and is replaced each time. The guard is not removed as often because of the location of the grease fittings. The team shares this information with the miners. **(REVIEW)**

# Example - SMART

- The team develops an educational program that teaches miners how to identify and eliminate moving machine part hazards
- All employees are educated on the importance of designing guards that are light weight and easy to handle
- The grease fittings are relocated on the outside of guards

# Example - SMART

- Miners are recognized by management each time they are observed working safely around moving machine part hazards
- Miners are allowed to choose their rewards **(TRAIN)**

**The management and miner team has just Out<u>SMART</u>ed this risk!**

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When Miners & Mine Management are
Risk SLAMMERS

***together*** they

**Make the RIGHT Decision** and...

# Review

- **SLAM Risks the SMART Way is a safety and health tool that will help miners and mine management manage risk.**
- **MSHA personnel can carry this message to the mining industry and help them…**

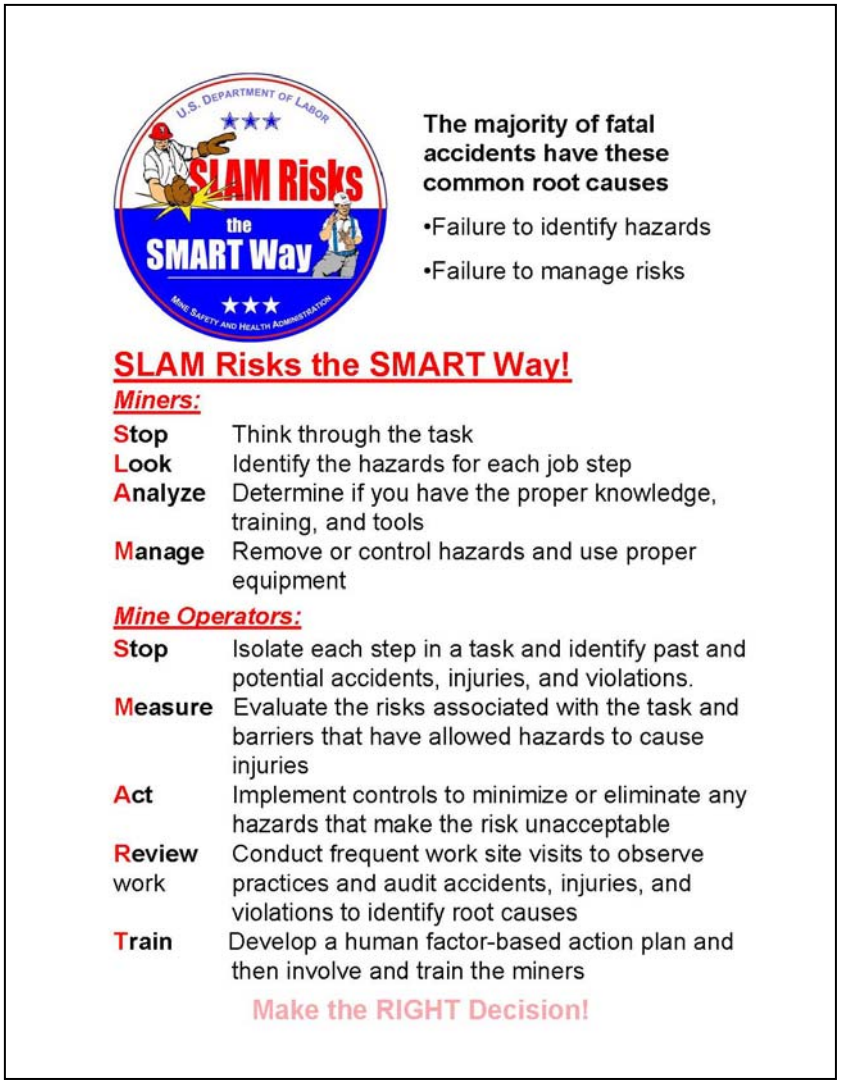
# OVERVIEW OF OUTREACH

- Hand out materials mailed to field offices with explanation of each
- Hand out materials posted on MSHA website
    - Laminated pocket card to help you discuss SLAM and SMART
- Questions can be sent to email address:

**zzMSHA-OutreachQ&A**

# CAMPAIGN STICKER

# “SLAM Risks the SMART Way” Flyer

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# Small Mines “SLAM Risks” Flyer

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**The majority of fatal accidents have these common root causes**

- Failure to identify hazards
- Failure to manage risks

## SLAM Risks!

***Miners:***

| | |
|---|---|
| **Stop** | Think through the task |
| **Look** | Identify the hazards for each job step |
| **Analyze** | Determine if you have the proper knowledge, training, and tools |
| **Manage** | Remove or control hazards and use proper equipment |

★★★★★★★★

Make the RIGHT Decision!

# Thank you cards

Coal FRONT


United States Department of Labor
MSHA
Mine Safety and Health Adminstration

***Thank you for***

***"making the RIGHT decision!"***

# Thank you cards

Coal BACK

"This RIGHT decision was discussed with me"

NAME RELATIONSHIP

Make the RIGHT Decision!

# Thank you cards

MNM Large Mines FRONT


United States Department of Labor
MSHA
Mine Safety and Health Adminstration

***Thank you for***

***"making the RIGHT decision!"***

Make the RIGHT Decision!

# Thank you cards

MNM Large Mines Back

**I care about my safety and health!**

**I am a RISK SLAMMER!**

Make the RIGHT Decision!

# Thank you cards

MNM Small Mines FRONT


United States Department of Labor
MSHA
Mine Safety and Health Adminstration

***Thank you for***

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## SLAM Risks the SMART Way

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